LUXNET CORPORATION

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1550nm 350um BFM PD

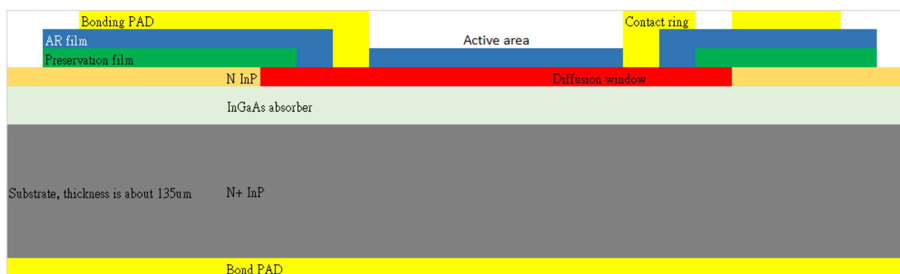
L-CR-AP99-05

Ver.：1.0

Type Name: L-CR-AP99-05

Product Description:

This 350µm Back-Facet-Monitor (BFM) PIN photodiode is designed for top illumination of the circular active region and is described with reference to Figure 1. The light passes into the device through an antireflection coated region, through the diffused p-type InP layer and is absorbed in the InGaAs active region. A reverse electrical bias is applied across the active region by the p and n ohmic contacts which are connected respectively to the P+ InP and the N+ InP. Connection to the anode bond-pad is made via separately deposits secondary interconnect metals. The optical aperture is 350µm in diameter. The key performance metrics of the device are the dark current and responsivity.



Application Note:

- The following document is intended to define the general specification for the characteristics of the 350µm BFM PIN photodiode (hereafter referred to as the 350µm BFM) for use in semiconductor laser power monitoring and etalon tuning applications.

All specifications or information contained herein are subject to change for improvement without notice.
Further details are available from any LUXNET sales representative.

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Product Specifications:

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max	Note
Forward Current	I_F	mA		3	
Reverse Voltage	V_R	V		20	
Reverse Current	I_R	mA		3	
Operating Temperature	T_{op}	°C	-40	85	
Storage Temperature	T_{stg}	°C	-40	100	
ESD threshold (HBM)	ESD	V	500		

Electro-Optical Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Unit	Min.	Typ	Max.	Test Condition
Aperture	D	µm	348	350	352	
Responsivity	RSP	A/W	0.95			λ = 1550 nm, V_R=5V
Dark current	I_D	nA			50	V_R=5V, 25°C
					1.0	V_R=5V, 25°C; Start of life
Breakdown voltage	V_B	V	30			I_R = 10uA
Capacitance	C	pF		10	15	V_R = 5V , f = 1 MHz
Linearity	LIN				2%	Pin: 0.1,0.5mW; V_R = 5V
Responsivity outside active area	RSPout	A/W			0.002	λ = 1550 nm, V_R=5V

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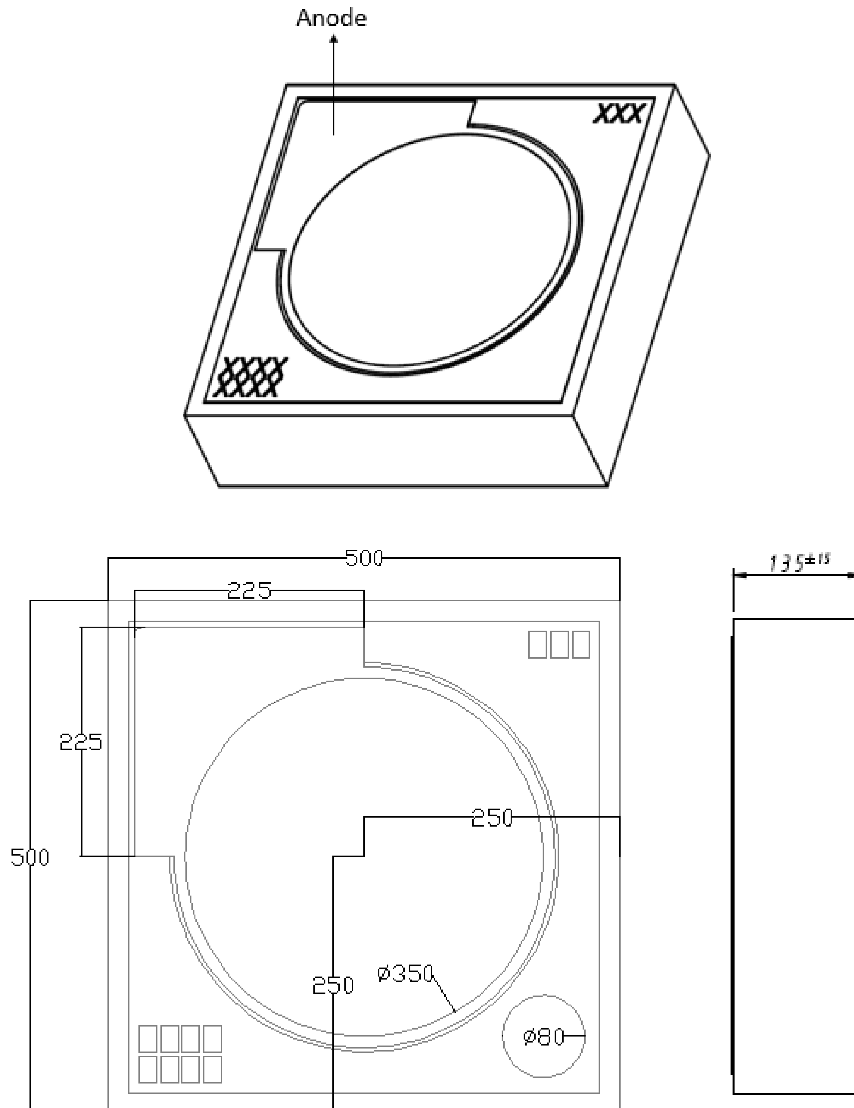
Dimension: (μm)

All dimensions are nominal



Chip configuration:

1. Bonding pad: Au (0.6um); Bottom contact: Au (0.5um)
2. Bonding pad diameter(Anode): 225*225 um
3. Dimension:

   Chip: 500μm (width) x 500μm (length) x 135μm (thickness)

   Tolerance: ± 15 μm (Chip thickness); ± 20 μm(Width, Length)

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Document History

Version	Date (MM/DD/YYYY)	Notes
0	06/28/2023	Initial

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